UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,961	12/31/2001	Jai-young Kim	030681-349	5416

21839 7590 07/07/2004

BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER	
FALASCO, LOUIS V	

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/029,961	KIM, JAI-YOUNG	
	Examiner	Art Unit	
	Louis Falasco	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 April 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-6,8-11* is/are rejected.

7)☒ Claim(s) *7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *9*.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

PAPERS RECEIVED

Applicants Amendment received 04/29/04 is acknowledged.

CLAIMS

The claims are 1, 3 to 11.

Claim 7(6,5,1) has been found allowable but is in objected to dependent form.

ACTIONS

Statutory Basis

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

REJECTIONS

Lack of Enablement

1. Claims 1, 3 to 6, 8 to 11 are rejected under 35 U.S.C. 112, first paragraph.

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The breadth of enablement is not commensurate in scope with the subject matter being claimed.

Claims 1, 3 to 6, 8 to 11 embrace subject matter not described in the specification in such a way as to enable one of ordinary skilled in the art to make and use the invention.

The instant disclosure fails to teach the ordinary skill worker in the art how to make and use the myriad possibilities which would fulfill the thickness in the range where the ratio of ***perpendicular coercivity*** – to – ***maximum perpendicular coercivity*** of the perpendicular magnetic recording layer, as claimed, without undue experimentation in the unpredictable magnetic recording disk art. The skilled artisan is given insufficient guidance in the instant disclosure to practicing the breadth of the subject matter claimed.

In the instant application the sum direction presented that would accomplish the thickness choice in the range where the ratio of ***perpendicular coercivity*** – to – ***maximum perpendicular coercivity*** decreases with thickness of the perpendicular magnetic recording layer are a comparatively a small number i.e., one composition along with close proximity thickness. The disclosure in the specification is exceedingly narrow compared with the myriad possibilities fulfilling the size and component possibilities within the ratio claimed. This does not bespeak routine experimentation for the numerous other possible combinations and permutations encompassed. There is

no evidence of this data for use in the ratio being available in the unpredictable magnetic recording art. Extensive experimentation would be required to find the meets and bounds of subject matter here claimed.

With such minimal guidance, the specification does not provide a reasonable amount of direction to one of ordinary skill for magnetic layer results claimed.

Applicants have disclosed a species of composition and an extent in an art that is unpredictable, hence requiring a complex time-consuming procedure to identify magnetic compositions and proportions in order to practice the invention within the scope of claims.

> "It is not enough that a person skilled in the art, by carrying on investigations along the line indicated in the instant application, and by a great amount of work eventually might find out how to make and use the instant invention. The statute requires the application itself to inform, not to direct others to find out for themselves." *In re Scarbrough*, 500 F.2d 560, 565, 182 USPQ 298, 301-02 (CCPA 1974)

Considering the lack of guidance in the instant specification for the breadth of claims and the low level of predictability in the art, extrapolating to the breadth of what has been claimed would require undue experimentation.

RESPONSE TO APPLICANTS' ARGUMENTS

Applicant's arguments filed 04/29/04 have been fully considered but they are not persuasive.

Applicant contended undue experimentation would not be required.

> It's argued that the worker would determine a ***perpendicular coercivity*** and then determine ***maximum perpendicular coercivity*** for each magnetic composition by comparison of coercivity at for all layer thicknesses, then plot [***perpendicular coercivity***] ***vs.*** [***maximum perpendicular coercivity***] to come up with a ratio. Applicants conclude this would not be undue experimentation.

Applicant has not presented how this would be accomplished for the wide variety of possible materials and dimensions essential to support of the position.

> Once the examiner has advanced a reasonable basis for questioning the adequacy of the disclosure, it becomes incumbent on the applicant to rebut that challenge and factually demonstrate that his or her application disclosure is in fact sufficient. *In re Doyle, 482 F.2d 1385, 1392, 179 USPQ 227, 232 (CCPA 1973); In re Scarbrough, 500 F.2d 560, 566, 182 USPQ 298, 302 (CCPA 1974); also MPEP § 2106, paragraph V.B.2 and § 2164 - § 2164.08(c).*

Furthermore it is evident that coercivity values and variations with layer thickness are not readily available the prior art.

> "The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation." *United States v. Telectronics, Inc.*, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988)

Applicants have cited *In re Angstadt* to support the position that the test of enablement is not whether if experimentation is necessary but if it is "undue". The *In re Angstadt* analysis is "not in a vacuum, but always in light of teachings of prior art and particular

application disclosure as it would be interpreted by one possessing ordinary skill level in pertinent art." (first paragraph of page 214). In the instant case, applicants have broadly claimed the invention and no teachings in the prior art would help establish these ratios without undue experimentation and as also pointed out in the *In re Angstadt* decent that "the specification does not enable the ordinary skill worker to practice the invention *as broadly claimed* without undue experimentation." (last sentence page 223).

Applicants have only disclosed a species of compositions and extends into all magnetic materials and magnetic alloys in an art that is unpredictable, and so requiring a complicated, unrelenting procedure of discovery to find alloys and materials to practice the invention within the scope of claims.

Objection

2. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants have provided examples enabling one of ordinary skill to make and use the invention of claim 7(6,5,1) the perpendicular recording layer where micro-domains can be formed at a reduced thickness of claim 7 of the CoCr alloy of claims 6 and 5 which claim 7 depend.

CONCLUSION

Claims 1, 3 to 11 have been considered.

- Claim 7(6,5,1) has been objected to but would be allowable if rewritten in independent form.
- Claims 1, 3 to 6, 8 to 11 have been rejected.

THIS ACTION IS MADE FINAL.

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event, a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

INQUIRES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis Falasco whose telephone number is (571)272-1507. The examiner can normally be reached on M-F 10:30 - 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (571)272-1516. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LF
6/04

STEVAN A. RESAN
PRIMARY EXAMINER